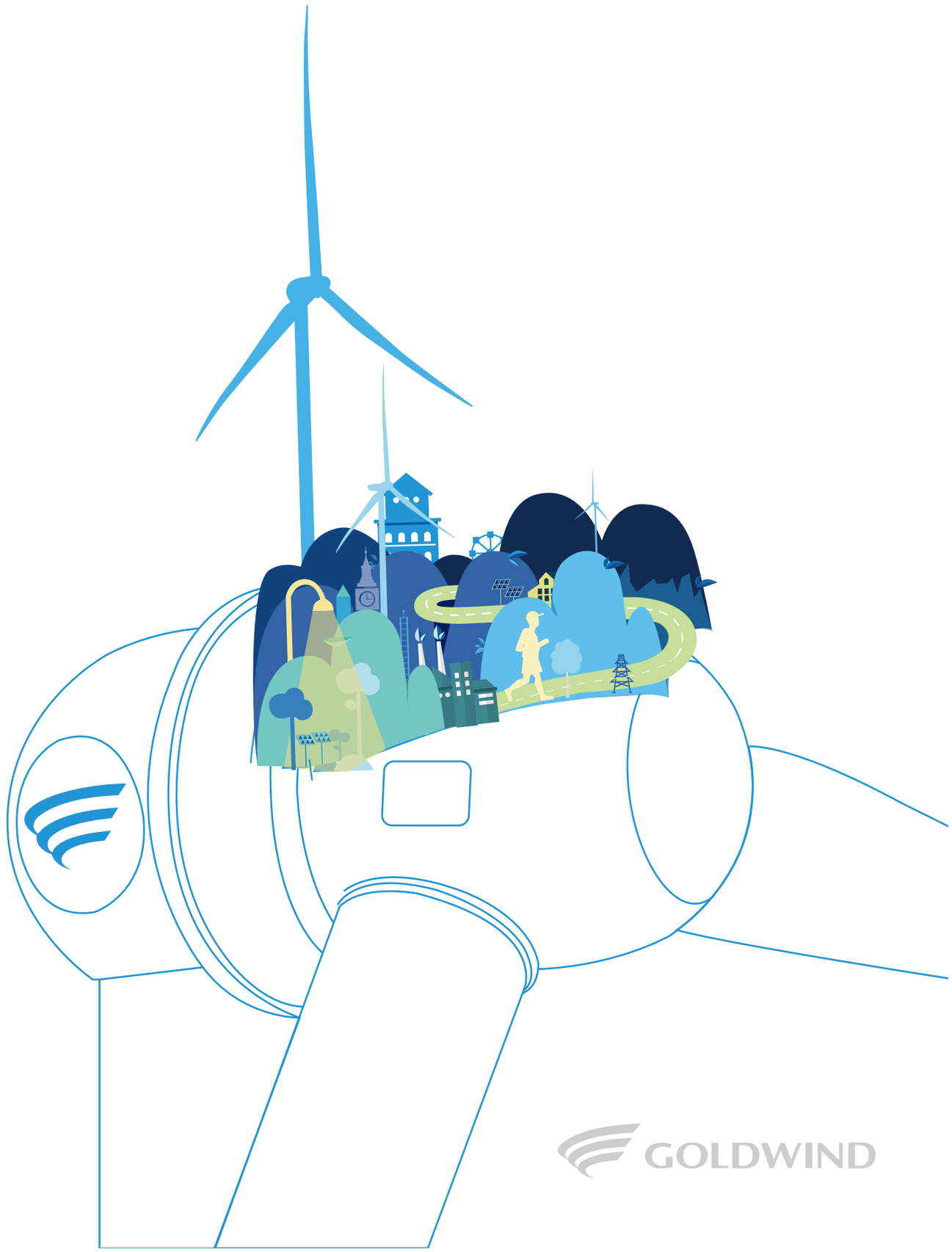
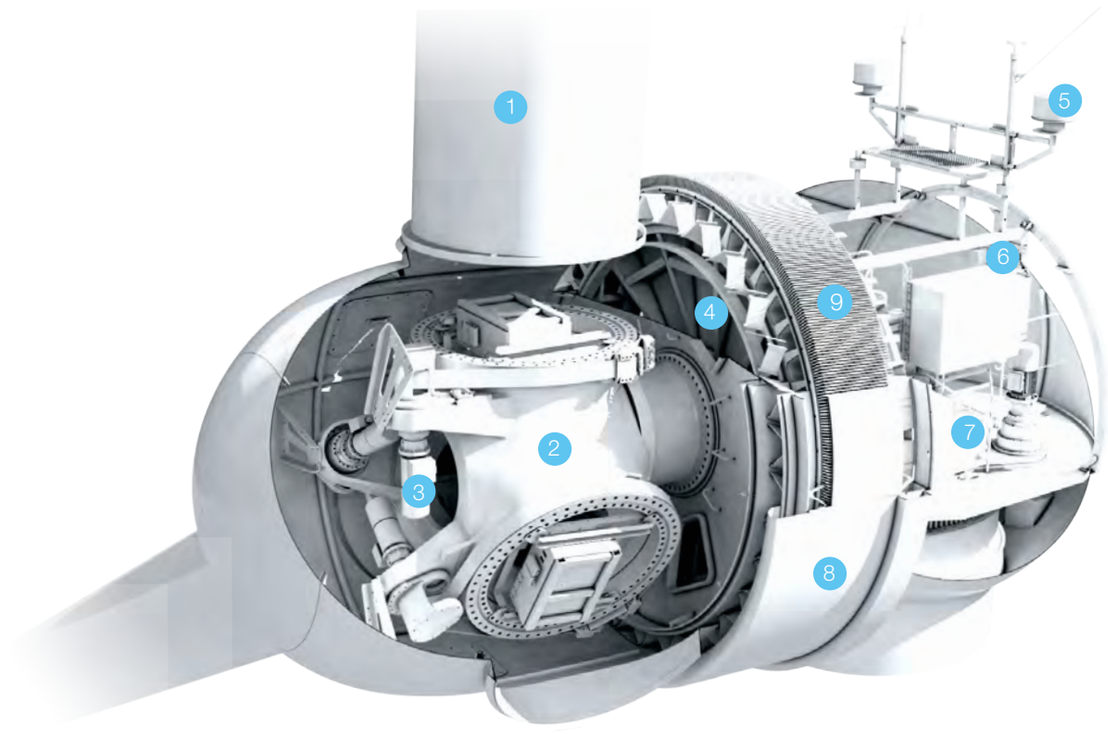
1SMW

PMDD WIND TURBINE



GOLDWIND

1S MW PMDD WIND TURBINE



1. Blade
2. Hub
3. Pitch System
4. Main Bearing
5. Wind Measurement Equipment
6. Hoist
7. Nacelle Base
8. Generator Rotor
9. Generator Stator

GOLDWIND 1S MW PMDD WIND TURBINE KEY FEATURES

Platform Evolution

- 20+ years of operational experience from 10,000+ Permanent Magnet Direct Drive (PMDD) wind turbines

High Efficiency

- Permanent Magnet Synchronous Generator (PMSG) eliminates excitation losses
- The absence of gearbox eliminates losses from ancillary systems such as lubricant distribution and thermal management

High Reliability

- The gearless drivetrain design eliminates the possibility of gear failure during the operational life of the turbine
- Maintenance-free design of the toothed belt pitch drive system simplifies pitch system maintenance requirements
- PMSG does not require high maintenance slip rings for conducting power

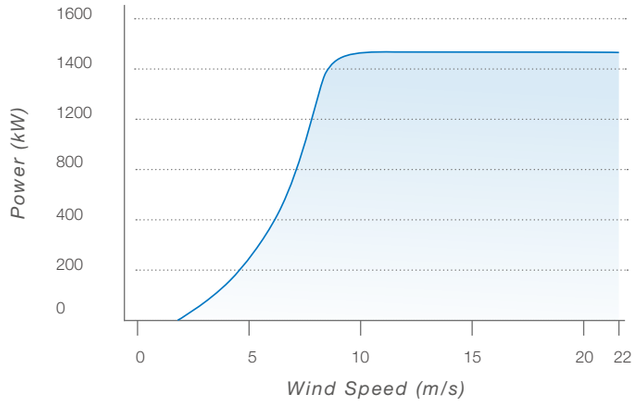
Highly Adaptable

- Grid Adaptability: Excellent zero, low and high voltage ride through capability and compliant with associated standards across the globe
- Maintenance Adaptability: Dual circuit design of generator and converter enables partial operation when one circuit is compromised
- Environment Adaptability: Flexible operation modes enable adaptation to extreme environmental conditions such as high and low temperature, noise constraints and challenging wind conditions
- Construction Adaptability: Individual blade assembly to conserve site space constraints

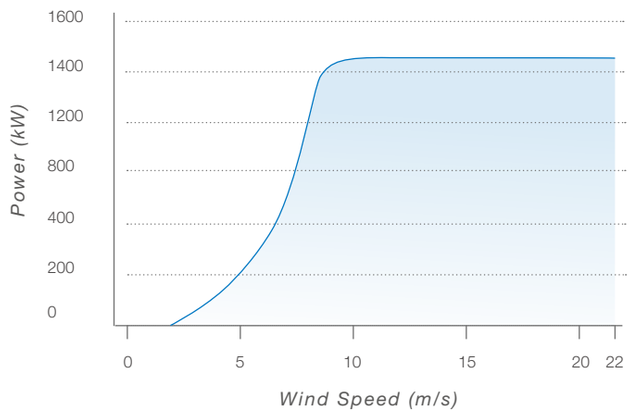
DYNAMIC POWER CURVE

GW 82/1500

Air Density: 1.225kg/m^3



GW 87/1500



TECHNICAL SPECIFICATIONS

1.5MW			
Item	Unit	Specifications	
Model		GW 82/1500	GW 87/1500
Paramenters			
Rated Power	kW	1500	
IEC Wind Turbine Class		IEC IIIA	IEC S
Cut-in Wind Speed	m/s	3	
Rated Wind Speed	m/s	10.3	9.9
Cut-out Wind Speed	m/s	22	22
Designed Service Life	Year	20	
Operating Temperature Range	˚C	–20°C – +40°C	
Survival Temperature Range	˚C	–30°C – +50°C	
Rotor			
Rotor Diameter	m	82	87
Rotor Swept Area	m^2	5325	5890
Generator			
Generator Type		Permanent Magnet Synchronous Generator (PMSG)	
Rated Power	kW	1580	
Rated Voltage	V	720	
Rated Rotor Speed	rpm	17.3	16.6/17.3
Converter			
Converter Type		Full Power Conversion	
Power Factor Regulation Range		Capacitive 0.95~inductive 0.95, dynamically adjustable	
Rated Frequency	Hz	50/60	
Rated Output Voltage	V	620/690	
Brake System			
Aerodynamic Brake System		Blade pitch triple-redundant	
Mechanical Brake System		Generator Brake (for maintenance)	
Yaw Brake			
Type/Design		Electric Motor drive/Four Planetary Stages for Speed Reduction	
Yaw Brake		Hydraulic Brake	
Control System and Lightning Protection			
Type		PLC Control System	
Lightning Protection Standard		Compliant with IEC 62305, IEC 61643, IEC 61400-24, and in conformance with GL Standards for the Certification of Wind Turbines	
Ground resistance	Ω	≤4	
Tower			
Type		Conical Steel Wind Turbine Tower	
Hub height	m	70/85	75/85
Weight			
Rotor (excluding blades)	t	13.9	13.9
Nacelle	t	11.8	11.8
Generator	t	44	44

INNOVATING FOR A BRIGHTER FUTURE

GOLDWIND

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